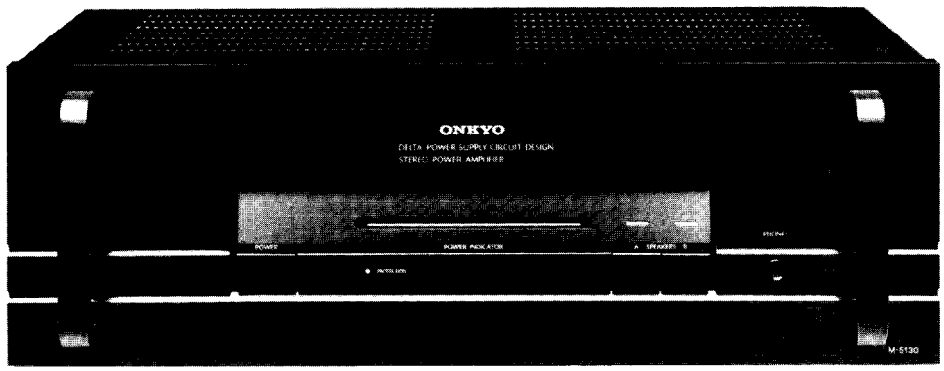
SERIAL No. 3273

ONKYO® SERVICE MANUAL

Stereo Power Amplifier

MODEL M-5130



UD	120V AC, 60Hz

ONKYO
AUDIO COMPONENTS

SPECIFICATIONS

Power Output:	105 watts per channel, min. RMS, at 8 ohms, both channels driven, from 20Hz to 20kHz, with no more than 0.09% THD
Total Harmonic Distortion:	0.09% at 105 watts
IM Distortion:	0.09% at 105 watts
Damping Factor:	40 at 8 ohms
Frequency Response:	5 – 100KHz ±1dB
Sensitivity and Impedance:	1V/50kohms
Signal to Noise Ratio:	100dB (IHFA-202 1 watt output)

General

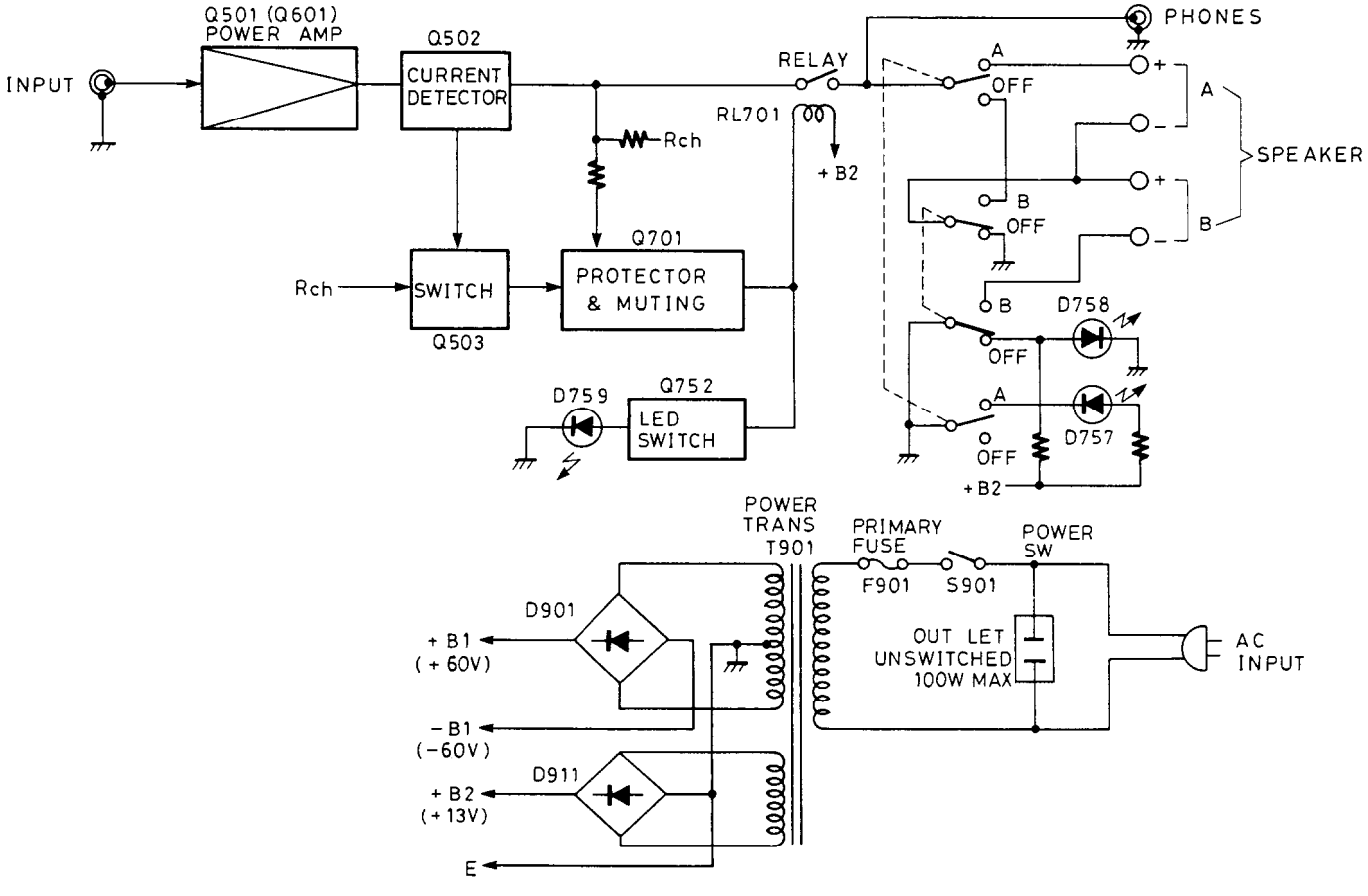
Power Supply:	AC120V, 60Hz
Dimensions (W x H x D):	435 x 158 x 286mm 17-1/8"x6-3/16"x11-1/4"
Weight:	7.7 kg, 17.0 lbs.

Remote Control Transmitter RC-81S

Transmitter:	Infrared
Signal range:	Approx. 5 meters, 16 ft•4"
Power supply:	Two "AA" batteries (1.5V x 2)
Dimensions (W x H x D):	64 x 18 x 149mm 2-1/2" x 11/16" x 5-7/8"
Weight:	110 grams, 3.9 oz. (including batteries)

Specifications and features are subject to change without notice.

BLOCK DIAGRAM



PRECAUTIONS

1. Replacing the fuses

For continued protection against risk fire, replace only with same type and same rating fuse.

CIRCUIT NO.	PARTS NO.	DESCIRPTION
F901	252052	7A (ST-6), Primary fuse

2. Insulation resistance mesurement

Connect the insulating-resistance tester between the plug of power supply cable and the terminal GND on the back panel. Specifications; More than 10MΩ at 500V.

3. Remote Control Transmitter Batteries

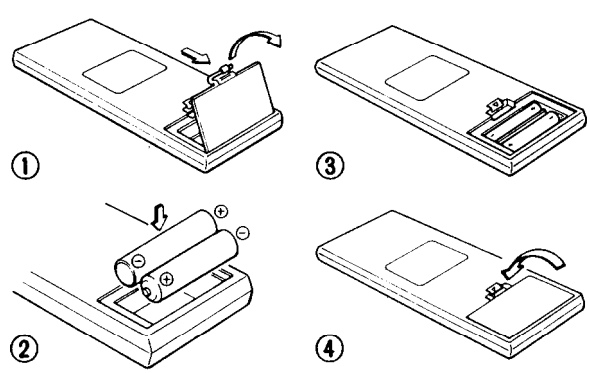
The remote control transmitter is powered by two batteries. Before using this unit for the first time, insert the two batteries (included) as shown in the diagram. The remote control transmitter has no on/off switch for its own. Average battery life is one year. This period may be shorter depending on the frequency of use and environment (temperature and humidity) in which the remote control transmitter is used. If the remote control transmitter does not operate even though front panel controls function normally, the batteries should be replaced. Use only batteries listed in the following chart.

Type	Voltage	Size
Manganese	1.5V	AA, R6, UM-3

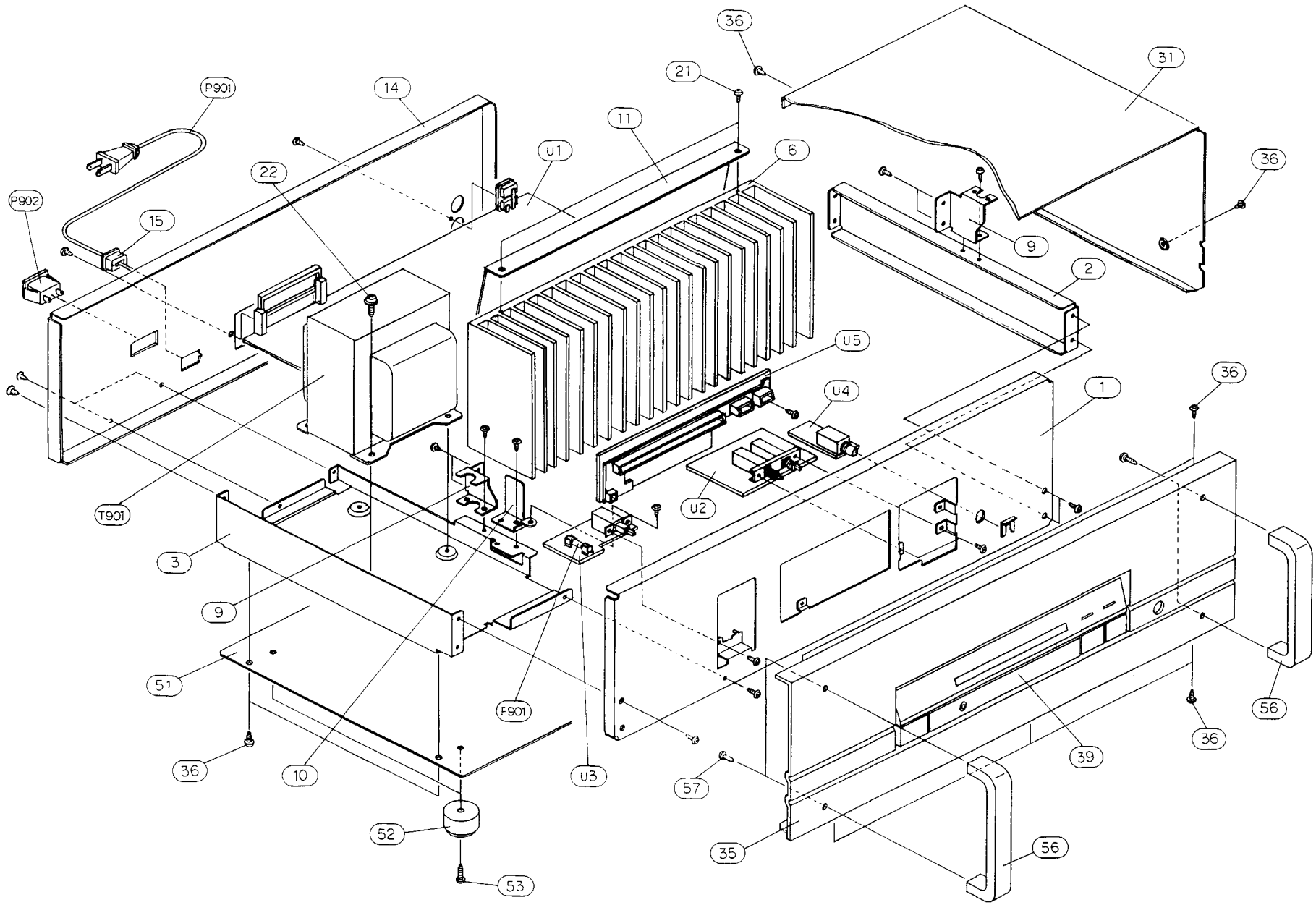
Note

1. The battery life is influenced by the way it is used, temperature, humidity and many other factors. On the average, they should last for one year.
2. Do not leave an expired battery in the case as it may leak or damage the battery case.
3. When inserting the batteries, be sure the (+) and (−) ends are properly aligned.
4. Do not use nickel-cadmium (rechargeable) batteries.
5. Do not use one specified (manganese) battery and one alkaline battery at the same time.
6. Replace both batteries at once, do not use one old and one new battery together.

Transmitter Battery replacement (RC-81S)



CHASSIS-EXPLODED VIEW



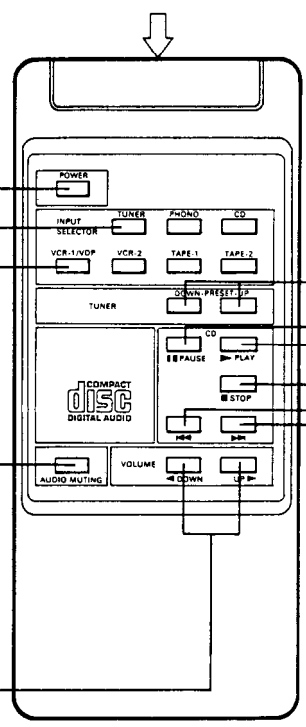
CHASSIS-EXPLODED VIEW PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	27110331A	FRONT BRACKET
2	27115221	SIDE BRACKET
3	27130404-2	BRACKET (PT)
6	27160207	HEATSINK
9	27141020B	BRACKET (HE)
10	27141114B	BRACKET (S)
11	27141137A	BRACKET (L)
14	27121011	BACK PANEL
15	27300750	BUSHING (CORD)
21	831130088	TAP-TIGHT SCREW 3TTW+8B
22	830440089	TAP-TIGHT SCREW 4TTC+8CBC
31	28184353A	TOP COVER
35	27210873A	FRONT PANEL
36	834430088	TAP-TIGHT SCREW 3TTS+8BBC
39	28322896A	KNOB AS
51	27170238	BOTTOM BOARD
52	280889B	LEG
53	831430168	TAP-TIGHT SCREW 3TTW+16BBC
56	28158034	HANDLE
57	830440109	TAP-TIGHT SCREW 4TTC+10CBC
⚠ T901	2300226	POWER TRANSFORMER NPT-961D
⚠ P901	253123 or	POWER SUPPLY CABLE AS-UC-6#18
	253136 or	POWER SUPPLY CABLE AS-UC-6#18
	253140	POWER SUPPLY CABLE AS-UC-6#18
⚠ P902	25050290	AC OUTLET NSCT-2P118T
⚠ F901	252052	FUSE 7A (ST-6)
U1	1A045562-2	NAAF-2862-2, POWER AMP. PC BOARD ASS'Y
U2	1A045563-2	NASW-2863-2, SPEAKER SWITCH PC BOARD ASS'Y
U3	1A044564-1	NASW-2864-1, POWER SWITCH PC BOARD ASS'Y
U4	1A044565-1	NAAF-2865-1, PHONES PC BOARD ASS'Y
U5	1A044566-1	NADIS-2866-1, DISPLAY PC BOARD ASS'Y

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PARTS NUMBER SPECIFIED.

REMOTE CONTROL TRANSMITTER (RC-81S)

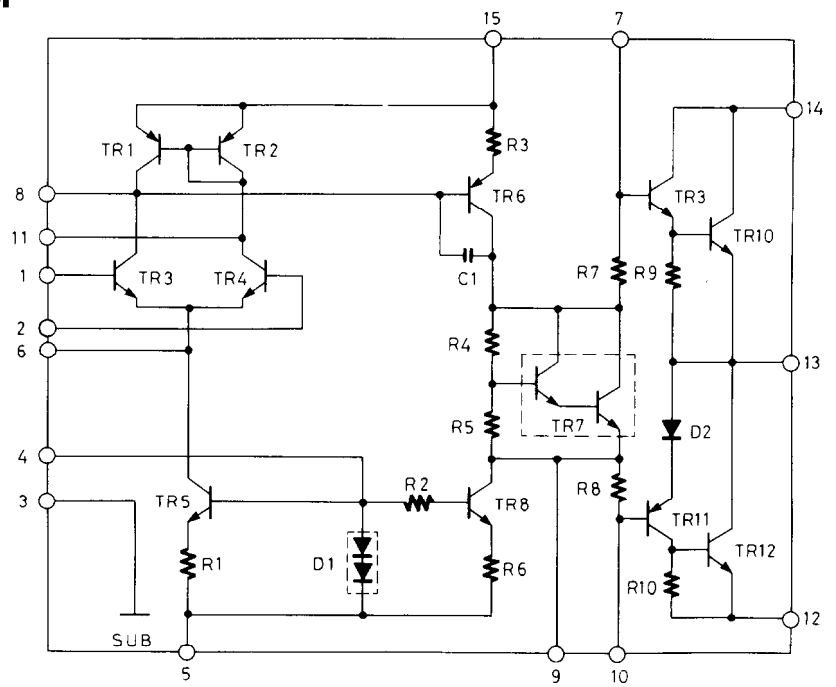
Remote Control Signal Transmission Window



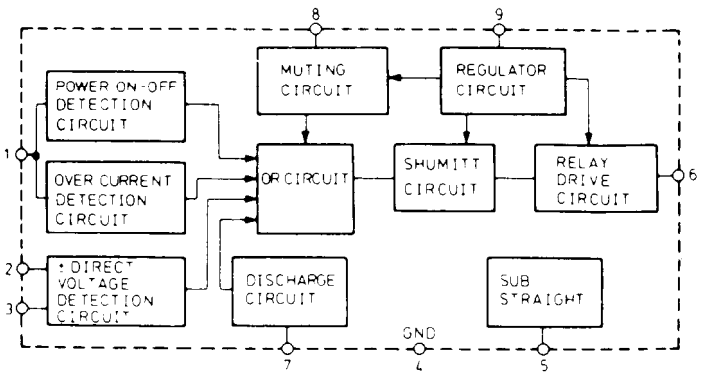
- POWER (PREAMPLIFIER)
  Turns the Preamplifier ON and OFF. It is not used to turn the transmitter itself OFF.
- INPUT SELECTOR (PREAMPLIFIER)
  Selects a desired source: TUNER, PHONO, CD, VCR-1/VDP, VCR-2, TAPE-1 or TAPE-2.
- AUDIO MUTING (PREAMPLIFIER)
  Press to mute the sound temporarily (Approx. −20dB). Press it once more to disengage muting.
- VOLUME(PREAMPLIFIER)
  Press UP to increase and DOWN to decrease the volume.
- STATION UP/DOWN (TUNER)
  Press to recall stations in the tuner memory. Press the UP key to recall the next higher memory channel and the Down key to recall the next lower memory channel.
- ▮▮ PAUSE (CD PLAYER)
  Press to pause the CD play back.
- ▶ PLAY (CD PLAYER)
  Press to play the CD player.
- ■ STOP (CD PLAYER)
  Press to stop the CD player.
- ⏮ (CD PLAYER)
  Press to go back to the beginning of the current track and again to skip back to the previous track.
- ⏭ (CD PLAYER)
  Press to skip to the next track.

IC BLOCK DIAGRAM

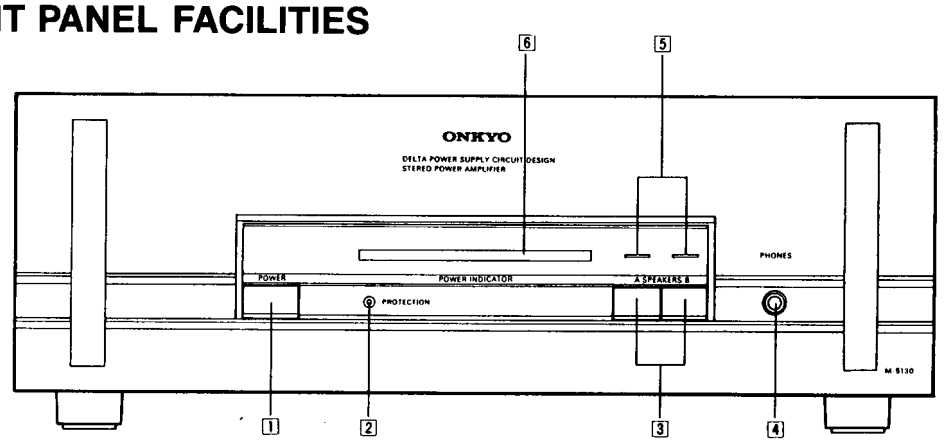
STK-4044V (Power Amp.)



TA7317P (Protective Circuit)

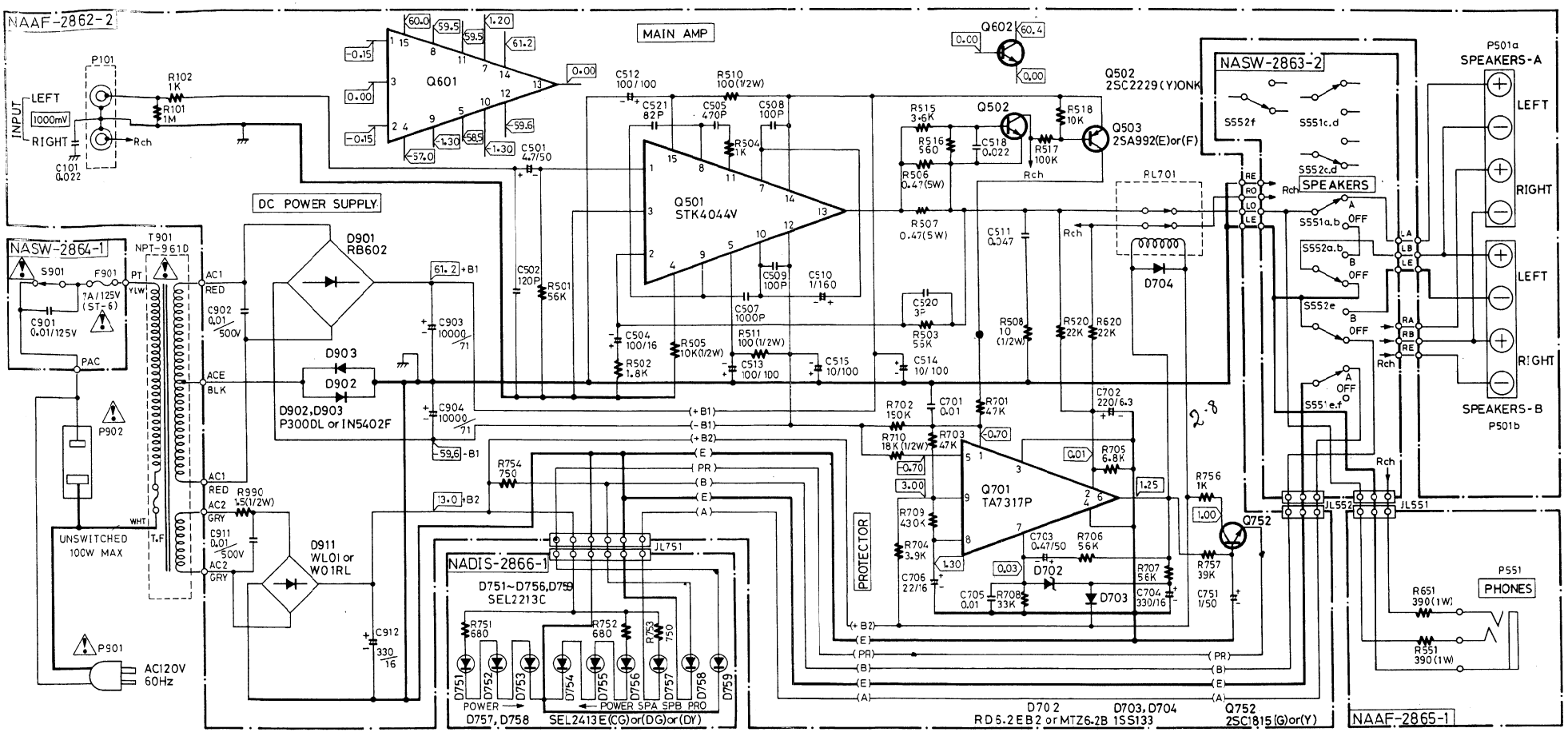


FRONT PANEL FACILITIES

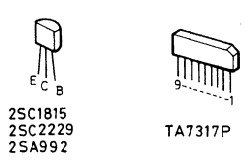


1. Power Switch (POWER)
2. Protection Indicator (PROTECTION)
3. Speaker Selector (SPEAKERS)
   NOTE: In the "A+B" mode, the speakers are connected in series.
   If only one pair of speakers is connected to the M-5130, no sound will be heard in this setting.
4. Headphone Jack (PHONES)
5. Speaker Indicator
6. Power Indicator (POWER INDICATOR)

SCHEMATIC DIAGRAM



NO	FUNCTION	POSITION	
S901	POWER	OFF	ON
S551	SPEAKERS A	OFF	A
S552	SPEAKERS B	OFF	B



—NOTES—

- ALL RESISTORS ARE IN OHMS 1/4WATTS or 1/6WATTS UNLESS OTHERWISE NOTED.
- ALL CAPACITORS ARE IN μF/50WV UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS(=⊞=)ARE IN μF/WV.
- ALL DIODES ARE 1SS133 UNLESS OTHERWISE NOTED.
- VOLTAGE(MEASURED WISH V.T.V.M)□V IS DC VOLTAGE.(NO INPUT SIGNAL)
- THE COMPONENTS INDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

ONKYO CORPORATION

PRINTED CIRCUIT BOARD PARTS LIST

POWER AMP. CIRCUIT PC BOARD (NAAF-2862-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q501, Q601	222051	STK4044V
Q701	222584	TA7317P
	Transistors	
Q502, Q602	2211639	2SC2229Y (ONK)
Q503	2211792 or	2SA992E or
	2211793	2SA992F
Q752	2211255 or	2SC1815GR or
	2211254	2SC1815Y
	Diodes	
D702	2239492 or	RD6.2EB2 or
	2243162	MTZ6.2B
D703, D704	223163	1SS133
D901	223898	RB602
D902, D903	223897F or	P300DL or
	22380003F	1N5402F
D911	223862 or	WL01 or
	223890	W01RL
	Capacitors	
C501, C601	3500093	4.7μF, 50V, Elect.
C504, C604	354741019	100μF, 16V, Elect.
C510, C610	354700109	1μF, 160V, Elect.
C511, C611	371124734	0.047μF, 50V, Mylar
C512, C513	354791019	100μF, 100V, Elect.
C612, C613		
C514, C515	354791009	10μF, 100V, Elect.
C614, C615		
C702	354722219	220μF, 6.3V, Elect.
C703	354784799	0.47μF, 50V, Elect.
C704	354743319	330μF, 16V, Elect.
C706	354742209	22μF, 16V, Elect.
C751	354780109	1μF, 50V, Elect.
C903, C904	3504191	10000μF, 71V, Elect.
C912	354743319	330μF, 16V, Elect.
	Resistors	
R505, R605	442521034F	10kΩ, 1/2W, Metal oxide film
R506, R507	4000080	0.47Ω, 5W, Metal plate
R606, R607		
R508, R608	441521004F	10Ω, 1/2W, Metal oxide film
R510, R511	442521014F	100Ω, 1/2W, Metal oxide film
R610, R611		
R710	442521834F	18kΩ, 1/2W, Metal oxide film
R990	442520154F	1.5Ω, 1/2W, Metal oxide film
	Relay	
RL701	25065275	NRL-2P5A-DC12-38
	Terminals	
P101	25045211	NPJ-2PDBL91, Input
P501	25060093	NTM-8PDML34, Output
	Bracket	
	27141059	Washer

SPEAKER SWITCH CIRCUIT PC BOARD (NASW-2863-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switches	
S551, (S552)	25035549	NPS-262-L511

POWER SWITCH CIRCUIT PC BOARD (NASW-2864-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitor	
C901	3500065A	0.01μF, AC400V/125V, IS
	Switch	
S901	25035550	NPS-111-1512P
	Fuse holders	
	250113	SN5051

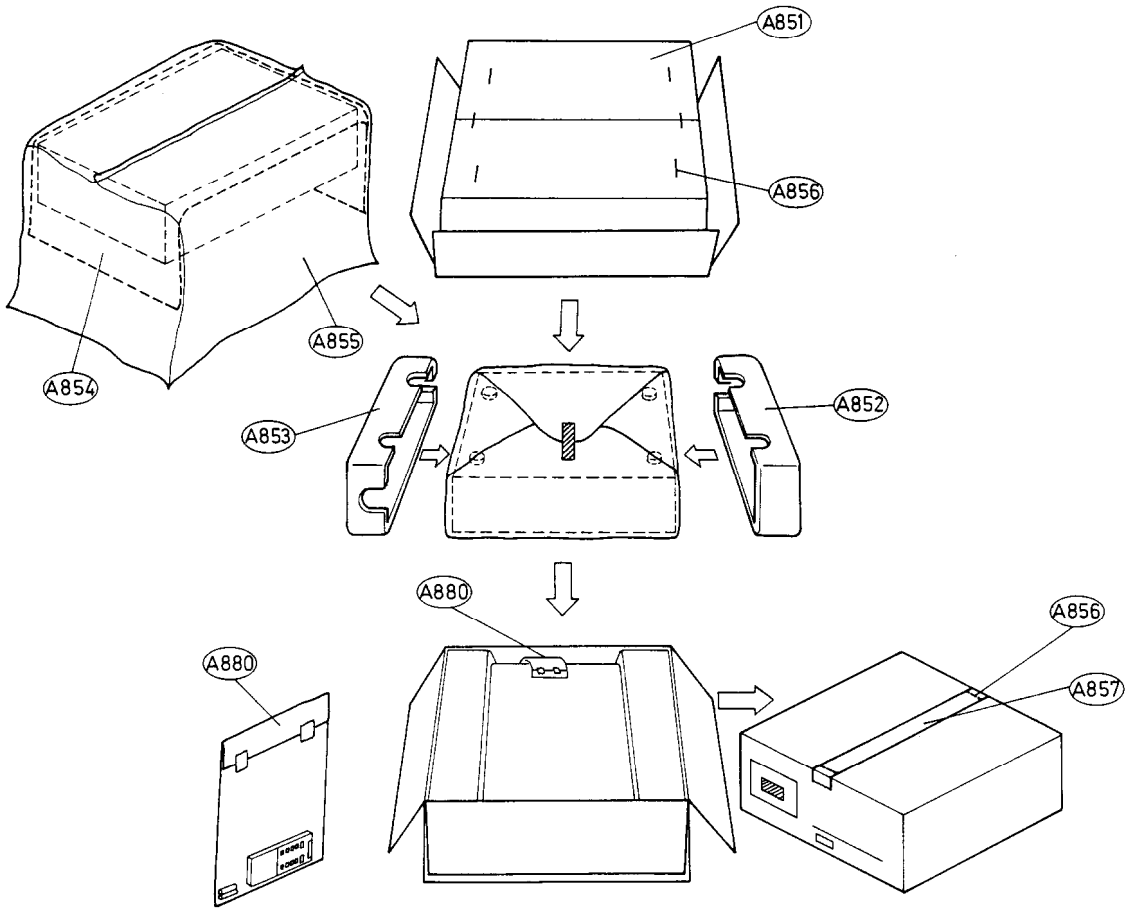
PHONES CIRCUIT PC BOARD (NAAF-2865-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R551, R651	441623914	390Ω, 1W, Metal oxide film
	Jack	
P551	25045187	HLJ-0541-01-010

DISPLAY CIRCUIT PC BOARD (NADIS-2866-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D751~D756	225141	SEL2213C
D759		
D757, D758	225137CG or	SEL2413ECG
	225137DG or	SEL2513EDG
	225137DY	SEL2413EDY
	Holder	
	27190510A	(LED)

PACKING MATERIALS



REF NO.	PART NO.	DESCRIPTION
A851	29051564	MASTER CARTON BOX
A852	29091152	PAD (L)
A853	29091153	PAD (R)
A854	29095012-1	SHEET 800X500
A855	29100033A	POLY BAG 750X500
A856	282301	STAPLE 16H
A857	260012	DAMPLON TAPE W50 BROWN
A880	Accessary bag ass'y	
	29341157	INSTRUCTION MANUAL
	29365019	WARRANTY CARD [N]
	29358002E	SERVICE STATION LIST [N]
	2010098 or	CONNECTION CABLE
	2010098A	CONNECTION CABLE
	24140008	REMOTE CONTROLE UNIT, RC-81S
	3010054	TWO BATTERIES, UM-3
	29100097	POLY BAG 350X250

NOTE [N] : Only U.S.A. Models

ONKYO CORPORATION

International Division: No. 24 Mori Bldg., 23-5, Nishi Shimbashi 3-chome, Minato-ku,
TOKYO 105, JAPAN Tel: 03-432-6987 Fax: 03-436-6979 TLX: 242-3551 ONKYO J
ONKYO U.S.A.CORPORATION
200 Williams Drive, Ramsey, N.J. 07446, U.S.A. Tel: 201-825-7950 Fax: 201-825-8150